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MODERN ERA CORONARY ARTERY BYPASS GRAFT PATENCY: ANGIOGRAPHIC AND FUNCTIONAL OUTCOMES IN THE CASCADE MULTICENTER RANDOMIZED CONTROLLED TRIAL

ACC Oral Contributions
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Session Title: Coronary Artery Bypass Surgery: Contemporary Issues in Graft Survival and Patient Outcomes
Abstract Category: Coronary Artery Bypass Surgery/Innovative Techniques
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Background: In the Clopidogrel after Surgery for Coronary Artery Disease (CASCADE) multi-center randomized controlled trial, patients undergoing primary multi-vessel coronary artery bypass graft surgery (CABG) with at least 2 saphenous vein grafts (SVG) were randomized to receive either aspirin plus clopidogrel or aspirin plus placebo for 1 year postoperatively. The primary outcome was SVG intimal hyperplasia on intravascular ultrasound at 1 year after CABG. The goal of the present substudy was to evaluate graft patency rates and functional outcomes following CABG.

Methods: Ten surgeons at 2 centers performed a mean of 3.5±0.7 grafts (range 2-6 grafts; total 396 grafts) on 113 patients. The mean patient age was 66.5±7.6 years, and 33 patients (29.2%) had diabetes mellitus. One-year clinical follow-up was complete in all patients, and 1-year angiography was completed in 92 patients. In this secondary analysis, we assessed functional outcomes as well as determinants of graft patency 1 year after surgery.

Results: There was no early mortality. One late death occurred from stroke. Four patients required readmission for cardiac ischemic events during the 1 year follow-up. At 1 year, 95.2% of patients were free of angina symptoms. The presence of diabetes did not significantly impact the incidence of cardiac ischemia over the follow-up period (6.1% versus 2.5%, diabetes versus no diabetes, P=0.58), and whether patients received more than 3 bypass grafts also did not impact the incidence of cardiac ischemia (4.4% versus 2.2%, ≤3 grafts versus >3 grafts, P=1.0). Overall 1-year patency was 307 of 322 examined grafts (95.3%). One-year internal thoracic artery graft patency was 98.2%, and 1-year saphenous vein graft patency was 93.8%. The presence of diabetes (96.7% versus 94.8%, diabetes versus no diabetes, P=0.57) and the number of grafts performed (94.5% versus 96.2%, ≤3 grafts versus >3 grafts, P=0.60) did not significantly impact patency.

Conclusions: CABG is associated with excellent angiographic and clinical outcomes in the modern era. The presence of diabetes or more than 3 bypass grafts did not significantly impact graft patency or clinical outcomes in this trial population.